

Analysis of Financial and Non-financial Performance Measurement with Traditional and Balanced Scorecard Approaches: Survey of Local Government Water Utility in Jambi Province

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Abstract. This study aims to analyze the Measurement of Financial and Non-Financial Performance using two approaches, the Traditional and the Balanced Scorecard. The study was conducted at Local Government Water Utility (PDAM) in Jambi Province. The data used is the PDAM Performance Report consisting of Financial and Non-Financial Reports. The results show the most appropriate performance measurement is the Balanced Score Card approach in the non-financial perspective consisting of the Customer perspective, the Internal Business Perspective, and the Growth and Learning Perspective, rather than the Traditional Performance Measurement which only focuses on Financial Performance.

Keywords: Financial performance · Non-financial performance · Traditional approach · Balanced Scorecard Approach

1 Introduction

Water is a basic need for living things, including humans. We must manage and manage water sources and uses so that they can be used efficiently and effectively. Water that involves the needs of the lives of many people, in its management is monopolized by the government. This is in accordance with the UUD 1945 Article 33 paragraph (3), which reads "The earth and water and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people".

Related to the authority of water management by the region regulated in Article 10 of Law no. 22 of 1999 concerning Regional Government states that "the region has the authority to manage regional resources available in its territory and is responsible for preserving the environment in accordance with laws and regulations". From this article the drinking water service is handed over to the Regional Government and through the Regional Regulation the implementation is handed over to an agency namely the Regional Drinking Water Company (PDAM).

Performance appraisal that is commonly done by PDAMs is the measurement of traditional approaches, namely performance measurements sourced from company financial information. In Indonesia, the measurement of PDAM performance is also regulated in the Decree of the Minister of Home Affairs Number 47 of 1999 concerning Guidelines on Performance Evaluation of Regional Water Supply Companies

(PDAMs). The indicators measured only use three aspects, namely financial aspects, operational aspects, and administration aspects.

Kaplan and Norton (1996) developed the concept of balanced scorecard (BSC) to complement financial performance measurements (or known as traditional measurements) that are important for corporate organizations to reflect new thinking in an era of organizational competitiveness and effectiveness. This concept measures company performance by using criteria that describe the company's vision, mission, and long-term strategy. These criteria are divided into four perspectives: (1) financial perspective, (2) consumer perspective, (3) internal business process perspective, and (4) learning and growth perspective.

PDAM is a company engaged in the field of water supply services. One of the objectives of establishing a PDAM is to meet the needs of the community for clean water, including the provision, development of facilities and infrastructure services and distribution of clean water, while the other goal is to participate in developing the economy to support regional development by expanding employment, and seeking profit as the main source of financing for the region. PDAM as one of the BUMDs is expected to be able to provide an adequate contribution.

This study was conducted to determine the differences in financial and non-financial performance in the PDAM Jambi Province specifically for PDAM Tirta Mayang, which began implementing the Balanced Scorecard approach in preparing the Company's Work Budget Work Plan since 2018. The problem raised in this study is how to measure Financial and Non Performance Finance for PDAMs in Jambi Province using the traditional approach and by using the Balance Score Card approach, and which measures are more appropriate for measuring PDAM performance.

2 Literature Review

Performance is a picture of the level of achievement of the implementation of an activity of an activity / program / policy in realizing the goals, objectives, mission and vision of the organization as outlined in the formulation of the strategic planning (strategic planning) of an organization. Performance measurement as a periodic determinant of the operational effectiveness of an organization, parts of the organization, and employees based on the targets, standards, and criteria that have been set previously.

Another understanding of performance measurement is a process of evaluating work progress against predetermined goals and objectives, including information on the efficient use of human resources in producing goods and services; quality of goods and services (how well goods and services are delivered to customers and to what extent customers are satisfied); the results of the activities are compared with the intended purpose; and the effectiveness of actions in achieving goals.

2.1 Performance Evaluation with Traditional Systems

In accordance with the Decree of the Minister of Home Affairs of the Republic of Indonesia Number 47 of 1999 concerning Guidelines for Performance Assessment of

PDAMs, several aspects were assessed, including the following; financial aspects, operational aspects and administrative aspects which are interrelated.

2.2 Measuring PDAM Performance with the Balanced Scorecard

In the Balanced Scorecard concept, not only the financial aspect (Finance) is the benchmark for company performance, there are three other measurement angles that are also taken into account, namely Customer, Internal Business Process and Learning and Growth.

The objectives of the Balanced Scorecard for organizations or companies (Kaplan, 2000) include:

- a) Clarify and consume strategies throughout the community.
- b) Aligning departmental and individual goals with organizational strategies.
- c) Identifying and aligning strategic initiatives.
- d) Conduct periodic strategy reviews.
- e) Get the feedback needed to improve the strategy.

3 Research Results

3.1 Overview of Financial and Non-financial Performance Measurement in PDAMS in Jambi Province using the Traditional Approach

Based on the level of health of the PDAM which is assessed based on BPPSPAM for 2015 to 2017 is considered healthy, although there are still many things that need attention from management because the achievement of the value of several indicators that are still below the standards are as follows:

- Financial aspects, Return of Equity (ROE) is still below the minimum standard that should be 10%. The operating ratio is still above the standard of 0.50 and the cash ratio is still low when compared to the minimum standard of 100%
- Service Aspect, Customer growth is still below the minimum standard of 10% Monthly Domestic Water Consumption is still below the standard of 30 M3 per month
- Operating Aspects, productivity efficiency is still below the standard of 90%, the level of water loss is still high with a standard of 20%, replacement of water meters is still low with a standard of 20%
- In the aspect of Human Resources (HR), the employee education and training ratio is still below the standard of 60% of the total number of employees. The ratio of training costs is still below the standard of 10% of the total employee costs.

3.2 Measurement of Financial and Non-financial Performance of Pdams in Jambi Province using the Balance Score Card Approach

3.2.1 Financial Perspective

Performance evaluation of financial aspects in principle is an assessment that includes the company's ability to create profits and streamline its operational activities.

Table 1. Overall Measurement Results of Financial Perspective indicators.

Indicator	year			Good criteria
	2015	2016	2017	
Gross Profit Margin	40,06%	42,15%	41,65%	>6%
Operating Profit Margin	0,77%	-2,49%	-0,91%	>6%
Return On Asset	0,71%	-1,99%	-0,74%	>7%
Current Ratio	63,77%	269,47%	150,06%	>200%
Total Asset Turnover	92,75%	79,94%	81,17%	>100%

From the table above, it can be seen that in the gross profit margin ratio, the company's financial performance can be assessed as good, then for the current ratio of companies that need to be active every year, but it must still be done efficiency of assets owned and properly control current debt. Furthermore, for the operating profit margin ratio, ROA, and TATO, the company's financial performance is considered bad, the company must be better able to maximize and manage every resource it has to increase the company's revenue / profit in order to realize good corporate financial performance.

Furthermore, given the above achievement scores as follows based on guidelines from BPPSPAM as follows:

Table 2. Results of BPPSPAM Financial Aspects Measurement.

INDICATOR	year 2015		year 2016		year 2017	
	condition	score	condition	score	condition	score
Return On Equity	2,10%	2	-2,71%	1	-1,03	1
Operating Ratio	0,99	2	1,02	1	1,01	1
Cash Ratio	14,70%	1	31,26%	1	18,36	1
Billing Effectiveness	93,43%	5	73,21%	1	84,02%	3
Solvency	182,0%	4	375,8%	5	355,7%	5
Value	0,67		0,37		0,48	

In line with the results of financial performance measurements conducted by researchers using several different measurement indicators, the results of BPPSPAM measurements on the overall financial aspects are considered less healthy.

3.2.2 Customer Perspective

The assessment of customer perspective performance aims to measure several service indicators that illustrate the level of the company's ability to meet the needs of its customers.

Table 3. Overall Measurement Results of Customer Perspective.

Indicator	year			Good criterion
	2015	2016	2017	
Customer Retention	96,97%	93,47%	96,09%	Increase
Customer Acquisition	3,03%	6,53%	4,91%	Increase
Customer Complaint Level	11,43%	12,57%	6,56%	Decrease

Overall customer perspective performance shows that the company's management is good enough in meeting customer needs and in increasing customer growth for the company. The company's management must continue to strive to improve performance in the customer sector because during 2015-2017 there are still several indicators that experience fluctuations in each year. Next to score the service aspects as follows:

Table 4. BPPSPAM Measurement Results Service Aspects.

INDIKATOR	2015		2016		2017	
	condition	value	condition	value	condition	value
Service Coverage	80,35%	5	85,50%	5	87,73%	5
Customer Growth	3,12%	5	6,98%	5	5,17%	5
Complaint Settlement Rate	100,00%	5	98,39%	5	79,88%	5
Pelanggan Water Quality	100,00%	5	0,00%	1	80,93%	4
Domestic Water Consumption	16,35	2	15,77%	2	15,55	2
Weight	1,10		1,03		1,08	

BPPSPAM measurement results on the overall service aspects are considered healthy even though the indicators for customer water quality and domestic water consumption are still at a low value and must be improved. While in other indicators, the company's performance is considered good or in the healthy category.

3.2.3 Internal Business Process Perspective

The internal business process perspective in the balanced scorecard highlights various important processes that support the company's strategy and operational activities. According to Kaplan and Norton (2001) performance measurement in the perspective of internal business processes as follows:

Table 5. Measurement Results of Several Internal Business Process Perspective Indicators.

Indicators	year			Good criteria
	2015	2016	2017	
Water Distribution Time	4 hours to 6 hours	6 hours to 12 hours	12 hours to 24 hours	Increases
New Connection Speed	3-6 days	3-6 days	3-6 days	decreases
Tera Water Meter	0,00%	0,00%	0,00%	-

Based on the above table and the results of in-depth interviews with related speakers as a whole the performance of the perspective of internal business processes shows that the company's management is quite good in optimizing the company's business processes and in improving services to consumers. Next to find out the score as follows:

Table 6. BPPSPAM Measurement Results Operational Aspects.

INDICATORS	2015		2016		2017	
	condition	value	condition	value	condition	value
Production Efficiency	74,45%	3	77,68%	3	68,17%	2
Water Loss Rate	45,86%	1	46,71%	1	44,82%	1
Operating Hours of Service / Day	23	5	24	5	24	5
Operating Hours of Service / Day	96,53%	5	55,86%	3	28,75%	2
Water Meter Replacement	1,97%	1	3,90%	1	5,24%	2
Weight	1,07		0,94		0,87	

The results of the measurement of operational aspects by BPPSPAM as a whole are considered healthy. However, it is necessary to improve performance, especially in the indicator of the level of water loss, where the existing conditions can be categorized as unhealthy because they are at a low value. This shows that the company has not been able to properly overcome the problem of this level of water loss, either caused by a leaky pipe, broken customer water meter or water theft.

3.2.4 Learning and Growth Perspective

This perspective assessment is whether there is productivity or not to create growth and improve the performance of human resources owned in the long run.

Table 7. Measurement Results Overall Perspective indicators.

Indicators	year			good criteria
	2015	2016	2017	
Employee Productivity	Rp.235.397920	Rp.244.007.110	Rp.255.307.710	Increasing
Employee Turnover Rate	0,58%	4,61%	0,57%	Decreased
Employee Absenteeism	7,90%	5,50%	3,72%	Decreased

Overall the performance of growth and learning perspectives has been good in improving employee quality, loyalty as well as employee interest and motivation in work as indicated by the measurement results of the three indicators which are considered good. Company management must continue to strive for growth and improvement in the quality of human resources owned by the company in order to improve overall company performance. Next to find out the score as follows:

Table 8. BPPSPAM Measurement Results Aspects of Human Resources.

INDICATORS	2015		2016		2017	
	Condition	value	Condition	value	Condition	value
Number of Employees / 1000	5,29	5	5,00	5	4,78	5
Employee Training Ratio	41,40%	3	50,43%	3	27,22%	2
Training Costs Against Employee Costs	1,16%	1	1,61%	1	0,60%	1
WEIGHT	0,51		0,51		0,47	

The table above is the result of performance measurement of aspects of PDAM human resources using different indicators, the results of the measurement of HR aspects conducted by BPPSPAM as a whole are considered healthy.

4 Conclusion

- 1 The measurement of the financial and non-financial performance of PDAMs is measured by the traditional approach showing:
 - Financial aspects show Return of Equity (ROE) which is 10% is still below the minimum standard that should be, operating ratio of 0.50 which is still above the standard, and Cash ratio of 100% is still low when compared with the minimum standard.
 - Service Aspect of 10% shows that customer growth is still below the minimum standard and Domestic Water Consumption per month is still below the standard of 30 M3 per month.
 - The Operational Aspect shows that the productivity efficiency is still below the standard of 90%, the level of water loss is still high with a standard of 20%, and the water meter replacement is still low with a standard of 20%.
 - The aspect of Human Resources (HR) shows that the ratio of employee training is still below the standard, which is 60% of the total number of employees and the ratio of training costs is still below the standard of 10% of the total employee cost.
- 2 Measurement of PDAM's financial and non-financial performance measured by the Balanced Scorecard approach shows:
 - a. The results of the measurement of financial perspectives with five indicators namely the ratio of gross profit, operating profit ratio, return on assets, current ratio, and total asset turnover can be said to be bad. Whereas on other indicators the company's financial performance is said to be bad because the measurement results are far below the good criteria. This shows that the company has not been able to optimally in the achievement of sound and sustainable financial management.
 - b. The results of measuring the customer perspective with three indicators namely customer retention, customer acquisition, and the level of customer complaints looks good The company must continue to pay attention to the development of customer needs and improve service, especially to customer complaints.
 - c. Measurement of the perspective of internal business processes with indicators such as time of water distribution, efficiency and effectiveness of production, speed of new connections, customer service, and lighting of water meters need to be developed continuously. Then in terms of consumer protection is still bad, this can be seen from the company has never done customer water meter illumination in order to maintain honest, fair and transparent orderly measures.
 - d. The results of measuring growth and learning perspectives show good. Employee productivity continues to increase every year by motivating and controlling

work so that employees are increasingly motivated and continue to produce productivity for the company which will certainly affect other perspectives.

- 3 The balanced scorecard approach is more appropriate in measuring the financial and non-financial performance of PDAMs than the traditional approach.

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